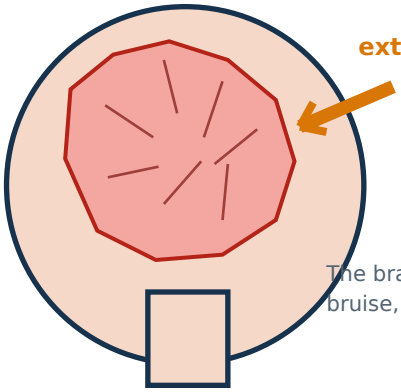
TRAUMATIC BRAIN INJURY

A modern guide for patients, families, and caregivers



The brain can move, twist, bruise, bleed, or swell.

Understand what happened.
Know the warning signs.
Support recovery.

Traumatic brain injury (TBI) can affect thinking, movement, emotions, behavior, sleep, and daily life. Recovery varies widely. This guide explains what to watch for, what helps, and when to seek urgent care.

IMPORTANT

This guide is educational and does not replace evaluation or advice from your healthcare team. A head injury can be serious even when symptoms seem mild at first.

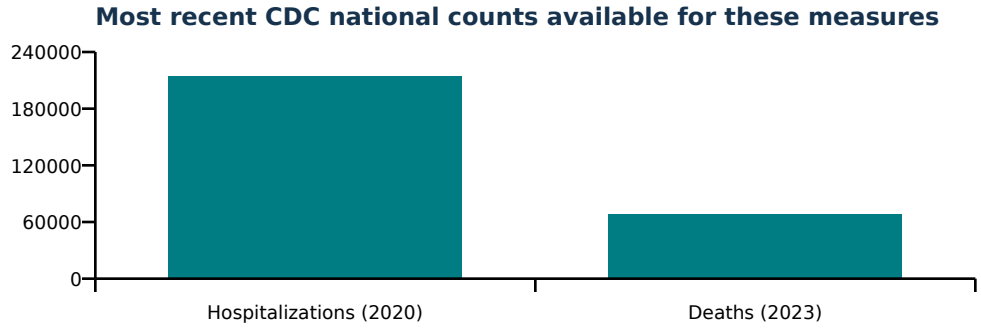
Updated with CDC data and guidance available through 2026. Reworked from the Brain and Spinal Injury Center patient resource page; older statistics have been replaced with current national figures where available.

1. What is a traumatic brain injury?

A traumatic brain injury is an injury that affects how the brain works. It can result from a bump, blow, or jolt to the head, a hit to the body that makes the head and brain move rapidly, or a penetrating injury. TBI ranges from mild TBI (often called concussion) to moderate and severe injury.

MILD / CONCUSSION	MODERATE	SEVERE
Symptoms can be significant even when routine imaging is normal. Most people improve, but some symptoms can persist.	May involve longer loss or alteration of consciousness, more significant imaging findings, and greater functional impact.	Can cause long-term or lifelong changes and may require intensive medical care and rehabilitation.

TBI in the United States



Current national picture: CDC reports approximately 214,110 TBI-related hospitalizations in 2020 and 68,663 TBI-related deaths in 2023. These estimates do not include many injuries treated only in emergency departments, urgent care, primary care, or not treated at all. Adults age 75 and older have the highest numbers and rates of TBI-related hospitalization and death. Males have substantially higher hospitalization and death rates than females.

Source: CDC, TBI Data, updated April 27, 2026.

2. Symptoms: what you may notice

Symptoms vary by person and may appear immediately or hours to days later. They can also change during recovery.

Physical	Headache; dizziness or balance problems; nausea or vomiting; fatigue; sensitivity to light or noise; vision problems.
Thinking & memory	Feeling slowed down, foggy, or groggy; trouble concentrating, remembering, planning, or thinking clearly.
Emotional & behavioral	Irritability, anxiety, sadness, feeling more emotional, or changes in behavior.
Sleep	Sleeping more or less than usual, trouble falling asleep, or disrupted sleep.

Emergency danger signs

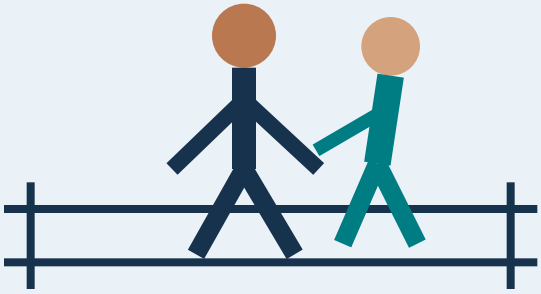
SEEK EMERGENCY CARE NOW

After a bump, blow, or jolt to the head or body, urgent warning signs include a headache that worsens and does not go away; repeated vomiting; seizures; weakness, numbness, or decreased coordination; slurred speech or unusual behavior; one pupil larger than the other; increasing confusion, agitation, or restlessness; inability to recognize people or places; loss of consciousness; or extreme drowsiness / inability to wake. For infants and young children, persistent inconsolable crying or refusal to nurse/eat are additional warning signs.

Because symptoms can overlap with other conditions, a healthcare professional should evaluate suspected mild TBI or concussion. Older adults deserve particular attention after falls or crashes, especially when taking anticoagulant or antiplatelet medicines, because brain bleeding may be harder to recognize early.

3. Recovery: a gradual, symptom-guided process

Rehabilitation is individualized and often multidisciplinary.



For mild TBI or concussion, recovery is usually progressive. CDC notes that with proper care, most people can return to work, school, and many other activities within days to weeks. Some people have symptoms for months or longer.

A practical recovery framework

1	First 1-2 days Use relative rest. Reduce activities that clearly worsen symptoms, but avoid prolonged strict inactivity unless your clinician directs it.
2	Begin light activity As tolerated, add light physical and cognitive activity that does not significantly worsen symptoms.
3	Build back routines Increase school, work, household, and community activities gradually. Use symptoms as a guide and take breaks when needed.
4	Return to higher-risk activity Driving, sports, and activities with risk of another head injury need individualized guidance. Athletes should return to sport only with healthcare-provider approval and a graduated progression.

Contact your healthcare provider if symptoms are worsening, are not improving as expected, or persist beyond the timeframe your clinician discussed. CDC advises follow-up when symptoms do not go away within about 2-3 weeks after mild TBI/concussion or worsen after return to regular activities.

4. Rehabilitation and the care team

Moderate and severe TBI may affect movement, communication, cognition, behavior, mood, sleep, and independence. Rehabilitation can continue across inpatient, outpatient, home, and community settings. The plan should reflect the person's goals, symptoms, safety needs, and stage of recovery.

Physiatry / rehabilitation medicine	Coordinates medical rehabilitation and functional recovery.
Physical therapy	Mobility, balance, strength, endurance, transfers, walking, and fall prevention.
Occupational therapy	Daily activities, home/community function, cognition, vision-related strategies, and return to roles.
Speech-language pathology	Communication, cognition, memory strategies, and swallowing when needed.
Neuropsychology / psychology	Cognitive assessment, emotional adjustment, behavior, coping, and return-to-school/work planning.
Social work / case management	Community resources, benefits, caregiver support, transportation, housing, and continuity of care.

For family and caregivers

- Expect recovery to be uneven. Fatigue, overstimulation, memory problems, and emotional changes can make good days and difficult days alternate.
- Keep instructions simple and consistent. Use calendars, written reminders, routines, and one task at a time when helpful.
- Support independence while respecting safety limits. Ask the rehabilitation team what the person can do independently and where supervision is needed.
- Caregiver health matters. Use family, friends, support groups, social work, respite, and community resources before needs become urgent.

The Brain and Spinal Injury Center describes a continuum of neurotrauma care that includes neurosurgery, nursing, physical therapy, occupational therapy, speech therapy, physiatry, neuropsychology, social work, outreach, and patient/family support.

5. Prevention and planning ahead

A previous TBI can increase the importance of preventing another injury. Prevention strategies depend on age, activity, and risk factors.

Falls	Review medications and vision; improve lighting; remove trip hazards; use railings/grab bars when appropriate; address strength and balance with your care team.
Driving	Do not drive until it is safe. Attention, processing speed, vision, reaction time, seizures, medications, and fatigue can all affect driving.
Sports & recreation	Use appropriate protective equipment and follow concussion protocols. Do not return to contact or collision risk before medical clearance.
Work & school	Temporary accommodations may include shorter days, rest breaks, reduced workload, quieter environments, extra time, or staged return.

Questions to bring to your healthcare team

- What symptoms should prompt an emergency visit or urgent call?
- When can I return to work, school, exercise, driving, and sports?
- Which medicines are safe for my symptoms, and are any current medicines increasing fall or bleeding risk?
- Would physical, occupational, speech, vestibular, vision, neuropsychological, or mental health services help?
- What accommodations or written instructions should I share with my employer or school?

Keep a simple recovery record

Track major symptoms, sleep, activity tolerance, medication changes, appointments, and questions. A short record can help you and your clinicians see patterns without requiring you to remember every detail.

6. Trusted resources & sources

Use reputable, regularly updated sources. The original Brain and Spinal Injury Center page includes many useful organizations, but some statistics and links reflect older material. This edition prioritizes current CDC guidance and preserves the original page’s emphasis on education, rehabilitation, family support, and community resources.

CDC - TBI Data (Apr. 27, 2026)
https://www.cdc.gov/traumatic-brain-injury/data-research/index.html

CDC - Symptoms of Mild TBI and Concussion (Sept. 15, 2025)
https://www.cdc.gov/traumatic-brain-injury/signs-symptoms/index.html

CDC - What to Do After a Mild TBI or Concussion (Sept. 15, 2025)
https://www.cdc.gov/traumatic-brain-injury/response/index.html

CDC HEADS UP - Managing Return to Activities (July 28, 2025)
https://www.cdc.gov/heads-up/hcp/clinical-guidance/index.html

CDC - About Moderate and Severe TBI
https://www.cdc.gov/traumatic-brain-injury/about/moderate-severe-tbi.html

Brain and Spinal Injury Center - Traumatic Brain Injury
https://brainandspinalinjury.org/patients-families/traumatic-brain-injury/

Brain and Spinal Injury Center - Clinical Program
https://brainandspinalinjury.org/providers/basic-clinical-program/

Brain and Spinal Injury Center - Community Resources
https://brainandspinalinjury.org/patients-families/community-resources/

Editorial note: This is a newly written educational guide, not a reproduction of the source webpage. National statistics were updated to the latest CDC figures located during preparation. Clinical decisions should be individualized by a qualified healthcare professional.